

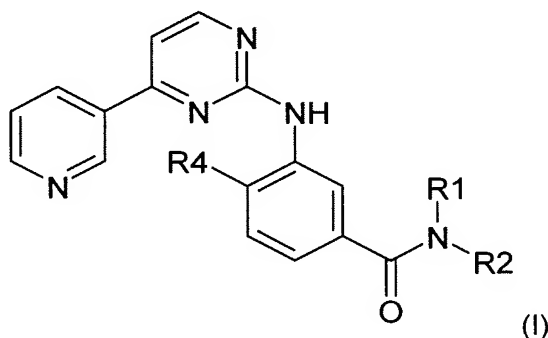
Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application.

Listing of Claims:

Claim 1 (Canceled)

Claim 2 (Currently amended): ~~The A method according to claim 1 wherein the inhibitor is for the treatment of neurological and vascular disorders related to beta-amyloid generation and/or aggregation comprising administering a compound of formula I~~



wherein

R₁ represents hydrogen, lower alkyl, lower alkoxy-lower alkyl, acyloxy-lower alkyl, carboxy-lower alkyl, lower alkoxycarbonyl-lower alkyl, or phenyl-lower alkyl;

R₂ represents hydrogen, lower alkyl, optionally substituted by one or more identical or different radicals R₃, cycloalkyl, benzcycloalkyl, heterocyclyl, an aryl group, or a mono- or bicyclic heteroaryl group comprising zero, one, two or three ring nitrogen atoms and zero or one oxygen atom and zero or one sulfur atom, which groups in each case are unsubstituted or mono- or polysubstituted;

and R₃ represents hydroxy, lower alkoxy, acyloxy, carboxy, lower alkoxycarbonyl, carbamoyl, N-mono- or N,N-disubstituted carbamoyl, amino, mono- or disubstituted amino, cycloalkyl, heterocyclyl, an aryl group, or a mono- or bicyclic heteroaryl group comprising zero, one, two or three ring nitrogen atoms and zero or one oxygen atom and zero or one sulfur atom, which groups in each case are unsubstituted or mono- or polysubstituted;

or wherein R₁ and R₂ together represent alkylene with four, five or six carbon atoms optionally mono- or disubstituted by lower alkyl, cycloalkyl, heterocyclyl, phenyl, hydroxy, lower alkoxy,

amino, mono- or disubstituted amino, oxo, pyridyl, pyrazinyl or pyrimidinyl; benzalkylene with four or five carbon atoms; oxaalkylene with one oxygen and three or four carbon atoms; or azaalkylene with one nitrogen and three or four carbon atoms wherein nitrogen is unsubstituted or substituted by lower alkyl, phenyl-lower alkyl, lower alkoxycarbonyl-lower alkyl, carboxy-lower alkyl, carbamoyl-lower alkyl, N-mono- or N,N-disubstituted carbamoyl-lower alkyl, cycloalkyl, lower alkoxycarbonyl, carboxy, phenyl, substituted phenyl, pyridinyl, pyrimidinyl, or pyrazinyl;

R₄ represents hydrogen, lower alkyl, or halogen;
or a pharmaceutically acceptable salt thereof.

Claim 3 (currently amended): A method according to ~~claim 1~~ claim 2 wherein the inhibitor is a compound selected from,

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzamide,
4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzanilide,
4-Methyl-N-(3-pyridinyl)-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzamide,
N-(4-Chlorophenyl)-4-methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzamide,
2(R)- and 2(S)-[4-methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzoylamino]propanoic acid,
4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-N-(8-quinolinyl)benzamide,
4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-N-(3-[trifluoromethoxy]phenyl)benzamide,
4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-N-(2-pyrrolidinoethyl)benzamide,
4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-N-(3-pyrrolidinophenyl)benzamide,
4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-N-(1-[2-pyrimidinyl]-4-piperidinyl)benzamide,
N-(4-Di-[2-methoxyethyl]amino-3-trifluoromethylphenyl)-4-methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzamide,
N-(4-[1H-Imidazolyl]-3-trifluoromethylphenyl)-4-methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzamide,
4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-N-(2-pyrrolidino-5-trifluoromethylphenyl)benzamide,
N-(3,4-difluorophenyl)-4-methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzamide,
4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-N-(3-trifluoromethylbenzyl)benzamide,
4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-N-(3-trifluoromethylphenyl)benzamide,
N-(3-Chloro-5-trifluoromethylphenyl)-4-methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzamide,
N-(4-Dimethylaminobutyl)-4-methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzamide,
4-Methyl-N-[4-(4-methyl-1-piperazinyl)-3-trifluoromethylphenyl]-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzamide,
4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-N-[4-(2,2,2-trifluoroethoxy)-3-trifluoromethylphenyl]benzamide,

4-Methyl-*N*-[4-(2-methyl-1H-imidazolyl)-3-trifluoromethylphenyl]-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzamide,

4-Methyl-*N*-(4-phenyl-3-trifluoromethylphenyl)-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzamide,

4-Methyl-*N*-[4-(4-methyl-1H-imidazolyl)-3-trifluoromethylphenyl]-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzamide,

Methyl 2(R)- and 2(S)-[4-methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzoylamio]-3-[4-hydroxyphenyl]propanoate,

N-[2-(*N*-Cyclohexyl-*N*-methylaminomethyl)phenyl]-4-methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzamide,

N-[3-[2-(1H-Imidazolyl)ethoxy]phenyl]-4-methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzamide,

4-Methyl-*N*-[3-morpholino-5-trifluoromethylphenyl]-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzamide,

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-*N*-(4-pyrrolidino-3-trifluoromethylphenyl)benzamide,

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-*N*-(4-piperidino-3-trifluoromethylphenyl)benzamide,

4-Methyl-*N*-[4-morpholino-3-trifluoromethylphenyl]-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzamide,

N-(4-Ethylamino-3-trifluoromethylphenyl)-4-methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzamide,

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-*N*-(3-trifluoromethoxyphenyl)benzamide,

N-[4-(2-Hydroxypropylamino)-3-trifluoromethylphenyl]-4-methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzamide,

N-(4-Diethylamino-3-trifluoromethylphenyl)-4-methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzamide,

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-*N*-[3-(3-pyridinyl)-5-trifluorophenyl]benzamide,

N-[3-[3-(1H-Imidazolyl)propoxy]phenyl]-4-methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzamide,

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-*N*-[4-(3-pyridinyl)-3-trifluorophenyl]benzamide,

4-Methyl-*N*-[3-(4-methyl-1-piperazinyl)-5-trifluorophenyl]-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzamide,

4-Methyl-*N*-[3-methylcarbamoyl-5-trifluorophenyl]-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzamide,

4-Methyl-*N*-[3-methylcarbamoyl-5-morpholino]-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzamide.

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-*N*-[3-[3-(1H-imidazol-1-yl)propoxy]phenyl]benzamide,

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-*N*-[3-[2-(1H-imidazol-1-yl)ethoxy]phenyl]benzamide,

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-*N*-[4-(ethylamino)-3-(trifluoromethyl)phenyl]benzamide,

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-*N*-[4-(diethylamino)-3-(trifluoromethyl)phenyl]benzamide,

(±)-4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-*N*-[4-[(2-hydroxypropyl)amino]-3-(trifluoromethyl)phenyl]benzamide,

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-*N*-[4-[bis(2-methoxyethyl)amino]-3-(trifluoromethyl)phenyl]benzamide,

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-*N*-[4-(4-methyl-1-piperazinyl)-3-(trifluoromethyl)phenyl]benzamide,

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-*N*-[4-(1-piperidinyl)-3-(trifluoromethyl)phenyl]benzamide,

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-*N*-[4-(1-pyrrolidinyl)-3-(trifluoromethyl)phenyl]benzamide,

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-*N*-[4-(4-morpholinyl)-3-(trifluoromethyl)phenyl]benzamide,

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-*N*-[4-phenyl-3-(trifluoromethyl)phenyl]benzamide,

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-*N*-[3-[4-(3-pyridinyl)-3-(trifluoromethyl)phenyl]methyl]benzamide,

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-*N*-[4-(1H-imidazol-1-yl)-3-(trifluoromethyl)phenyl]benzamide,

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-*N*-[4-(2,4-dimethyl-1H-imidazol-1-yl)-3-(trifluoromethyl)phenyl]benzamide,

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-*N*-[4-(4-methyl-1H-imidazol-1-yl)-3-(trifluoromethyl)phenyl]benzamide,

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-*N*-[4-(2-methyl-1H-imidazol-1-yl)-3-(trifluoromethyl)phenyl]benzamide,

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-*N*-[3-(4-morpholinyl)-5-[(methylamino)carbonyl]phenyl]benzamide,

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-*N*-[3-[(methylamino)carbonyl]-5-(trifluoromethyl)phenyl]benzamide,

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-*N*-[5-(3-pyridinyl)-3-(trifluoromethyl)phenyl]benzamide,

4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-N-[5-(4-morpholinyl)-3-(trifluoromethyl)phenyl]benzamide,
 4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-N-[5-(2-methyl-1H-imidazol-1-yl)-3-(trifluoromethyl)phenyl]benzamide,
 4-Methyl-N-[3-(4-methyl-imidazol-1-yl)-5-trifluoromethyl-phenyl]-3-(4-pyridin-3-yl-pyrimidin-2-ylamino)-benzamide,
 4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-N-[5-(5-methyl-1H-imidazol-1-yl)-3-(trifluoromethyl)phenyl]benzamide,
 4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-N-[3-(4-methyl-1-piperazinyl)-5-(trifluoromethyl)phenyl]benzamide, and
 4-Methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-N-[2-(1-pyrrolidinyl)-5-(trifluoromethyl)phenyl]benzamide;
 or a pharmaceutically acceptable salt thereof.

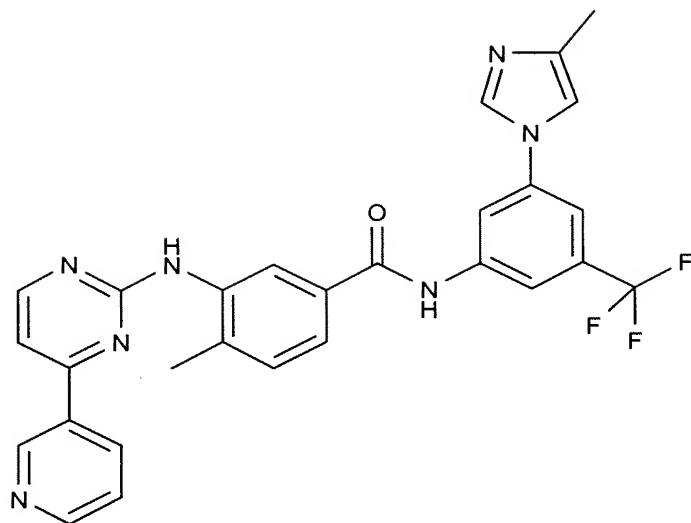
Claim 4 (currently amended): A method according to ~~claim 1~~ claim 2 wherein the inhibitor is 4-Methyl-N-[3-(4-methyl-imidazol-1-yl)-5-trifluoromethyl-phenyl]-3-(4-pyridin-3-yl-pyrimidin-2-ylamino)-benzamide;
 or a pharmaceutically acceptable salt thereof.

Claim 5 (currently amended): A method according to ~~claim 1~~ claim 2 wherein a daily dose of 10 to 800 mg of a compound is administered to an adult human.

Claim 6 (currently amended): A method according to ~~claim 1~~ claim 2 wherein the disease to be treated is selected from Alzheimer's disease, Down's Syndrome, memory and cognitive impairment, dementia, amyloid neuropathies, brain inflammation, nerve and brain trauma, vascular amyloidosis, or cerebral hemorrhage with amyloidosis.

Claim 7 (currently amended): A method according to ~~claim 1~~ claim 2 wherein the disease to be treated is Alzheimer's disease.

Claim 8 (original): A method of treating mammals suffering from neurological and vascular disorders related to beta-amyloid generation and/or aggregation which comprises administering to a said mammal in need of such treatment a pharmaceutical composition comprising
 (a) a dose, effective against neurological and vascular disorders related to beta-amyloid generation and/or aggregation, of 4-Methyl-N-[3-(4-methyl-imidazol-1-yl)-5-trifluoromethyl-phenyl]-3-(4-pyridin-3-yl-pyrimidin-2-ylamino)-benzamide having the formula I



(I);

or a pharmaceutically acceptable salt thereof and

(b) a therapeutically effective amount of a second drug selected from drugs used to treat neurological and vascular disorders related to beta-amyloid generation and/or aggregation.

Claims 9-10 (canceled)